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ABSTRACT

A two-part survey of 69 students (35 percent response) enrolled in the Master's of Distance Education (MDE) program at Athabasca University in December 1996 addressed three questions: (1) what specific technologies were of most interest to MDE students; (2) whether students accustomed to studying completely at a distance would accept a proposed hands-on technology workshop as part of the course; and (3) whether there were alternatives to requiring participants to come to the workshop. The study consisted of a computer-based questionnaire and telephone interview. One-fourth of respondents were noncommittal on attending the workshop. Many indicated that distance methods and technologies should be used to provide access to the workshop content, without the expense and inconvenience of coming to Edmonton. The technologies rated highest in the survey and mentioned most often in the interviews were World Wide Web-based development and delivery, videoconferencing, and computer conferencing. Respondents desired the following specific skills: technical, leadership, and applications skills; information and knowledge necessary to provide familiarity with the technologies; and the background to enable confident communication with technicians. Students perceived a great need for hands-on experience with technologies. A number of respondents suggested regional workshops. Respondents approved of the use of a wide range of technological options in the workshop. (Five tables are appended.) (YLB)

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GRADUATE STUDENTS' INTERESTS IN TECHNOLOGY TRAINING:

RESULTS OF A SURVEY

Calgary, Alberta, Canada

June, 1997

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INTRODUCTION

The distance education and training literature frequently identifies problems created by the lack of technology literacy among business executives, instructors and teachers (McKenzie, 1993; Nath, 1994; Lankard, 1995; Raizen, 1995). At the same time, there are examples of successful teaching with and about technology to solve persistent training and education problems (Clampitt and Meyer, 1995; Graham, 1994; Mulder, 1995), while principles to evaluate technology's economic impact, using concepts such as return on investment (Super, 1994), are also emerging. There is a clear sense in the literature that the need for technical training - and the means to provide it using distance education methods - have arrived. Our research shows that this view is shared by the graduate students in our Master of Distance Education program.

THE MDE COURSE DEVELOPMENT PROCESS, AND THIS STUDY

The Athabasca University (AU) Masters of Distance Education (MDE) program has benefited from the positive climate around distance education. The program is totally distance-delivered, and attracts students from across Canada. Some of the program's students are training for careers in distance education, while others are already employed in the field.

Since its establishment in 1994, the MDE program has had a perceived weakness: the program does not require students to demonstrate familiarity with distance learning technologies. In the fall of 1996, program faculty decided to act on the need for students to gain and demonstrate skill with technologies in the context of their program.

Using a systematic process to identify content and delivery options, the following questions (among others) were posed in the needs analysis phase of course development:

- What specific technologies are of most interest to MDE students?

- Would students accustomed to studying completely at a distance accept a proposed hands-on technology workshop as part of a course, especially if the workshop were to require participants to bear the costs of travel and subsistence in Edmonton for up to a week?

- Are there alternatives to requiring participants to come to the workshop; that is, what role might technology play in increasing access to or reducing costs of the workshop?

STUDY METHODOLOGY

To gather the information required in the needs analysis phase of course development, a two-part survey of students enrolled in the MDE program in December, 1996, was designed. The study consisted of a computer-based questionnaire, and a telephone interview. (The overall findings of both surveys are combined below. See the tables in the Attachment for details.)

FINDINGS

The Responding Sample

- A total of sixty-nine responses were received by January 13, 1997 (approximately 35% of enrolled students).

- Fully one-quarter of the respondents were non-committal on attending the workshop. In their comments, many of these indicated they felt distance methods and technologies should

be used to provide access to the workshop content, without the expense and inconvenience of coming to Edmonton.

- Geographical location of the respondent was not an obvious impediment to potential workshop participation: in fact, those who would have to travel furthest were actually slightly more likely than the more local group to express interest in attending.

Technologies of Interest

- The technologies rated highest in the computer-based survey, and mentioned most often without prompting in the telephone follow-up, were: WWW-based development and delivery, video-conferencing, and computer conferencing.

- The respondents desired the following specific skills: technical, leadership and applications skills; information and knowledge necessary to provide familiarity with the technologies; and the background to enable communicating confidently with technicians.

Course or Workshop?

The main findings in this area were:

- Students perceived a great need for hands-on experience with technologies; however, many objected to the workshop being the only means of accessing the technologies.

- If a workshop were held, respondents planning to attend preferred that it be held in July or August; that it be 5 days in length; and that some of their expenses (lodging, meals) be subsidized.

- A number of respondents who either would not attend a workshop in Edmonton, or who were unsure, felt there should be regional workshops more convenient to them.

- Respondents felt strongly that participants from government, business and industry should be permitted.

Potential of Technology to Facilitate Access to the Workshop

Survey participants were asked their views of the viability of technology as a means of extending access to the workshop. The findings:

- A significant proportion of the respondents (three-quarters) reported they either had, or could arrange, access to one or more distance learning technologies which might permit them to participate in the workshop without traveling to Edmonton.

- A core of respondents indicated they would choose to attend the workshop in person, despite having technologies which could permit access from a distance.

- Overall, respondents approved of the use of a wide range of technological options in the workshop, as an authentic demonstration of the capabilities of the tools.

CONCLUSIONS

The two surveys identified and confirmed that three areas of current technological development were of major interest to these graduate students in distance education: the World-Wide Web as an instructional delivery vehicle; videoconferencing of various types; and computer-mediated communications (in LAN, WAN, and Web versions).

The study revealed that students felt there should be an option to access the course, and major portions of the workshop, by distance technologies (synchronous and asynchronous). This was regarded as important, even among students who intended to attend the workshop in person.

It was also clear students felt that valuable lessons on the real workings of technology could be demonstrated by using technologies to make access widely available. Though no respondent used the term, the workshop seemed to be regarded as a laboratory for the development and demonstration of concrete applications of distance technologies.

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ATTACHMENT

Tables

Table 1: Source of response by province

Province of residence

	TOT #	TOT %
AB	21	30%
BC	13	19%
MB	6	9%
NF	3	4%
NS	1	1%
NWT	5	7%
ON	13	19%
SK	6	9%
USA	1	1%
TOTAL	**69**	**100%**

Table 2: Interested in enrolling in the workshop?

	Program	Non-Program	Total
Yes	52%	57%	54%
No	21	19	20
Not sure	27	24	26
TOTAL	**70%**	**30%**	**100%**

Table 3: Interest in the workshop, by region

	Western	Other	Total
Yes	52%	57%	54%
No	20	22	20
Not sure	28	22	26
TOTAL	**67%**	**33%**	**100%**

Table 4: Technologies identified for hands-on experience

Technologies	Total Mentions	Rank
15. WWW-based course delivery	53	1
7. Computer-mediated communications (CMC)	47	2
12. Videoconferencing	46	3
5. Cable-based Internet delivery	44	4
6. Computer-based multi-media applications	43	5
9. HTML applications	43	5
13. Videodisc, CD-ROM systems	41	7
11. Satellite-based course delivery	38	8
10. Intranet systems	38	8
8. E-mail systems	33	10
2. Audiographic enhancements to teleconferencing	32	11
4. Broadcast systems (TV, radio)	32	11
1. Audio teleconferencing	28	13
14. Videotape systems	24	14
3. Audiotape technologies	23	15
16. Other	2	16

Table 5: Technologies known or used by respondents

Technologies	TOJ*	Self	Course	Other
Web-related	4	3	1	2
CMC-related	4	0	6	0
Video-related	4	1	0	1
Computer-related	2	0	0	0
Other	2	1	0	3
TOTAL	**16**	**5**	**7**	**6**

*Training on the job.